Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Original) An optical communications system comprising at least one optical circuit, each optical circuit comprising:

a set of at least one downstream client unit, each client unit comprising:

an optical receiver which accepts an incoming optical signal;

a photodetector associated with the respective optical receiver and responsive to electromagnetic radiation accepted by it;

a demodulator associated with the respective photodetector;

a set of at least one upstream master unit, each master unit semi-permanently optically coupled to the respective client unit, each master unit comprising:

an optical source operative to generate an optical signal characterized by a free-space wavelength less than about 10 micrometers;

a modulator operative to modulate the respective optical signal;

an optical beam director associated with the respective optical source and operating to direct the respective optical signal into free-space;

a free-space air-path through which optical radiation from the master unit travels before arriving at the client unit; and

a set of at least one optical beam-deflector through which the optical signal from at least one master unit travels before arriving at the respective client unit, each optical beam-deflector dedicated to the respective optical circuit on a semi-permanent basis.

2. (Original) An optical communications system comprising one or more optical circuits, each optical circuit comprising:

a set of at least one downstream client unit, each client unit comprising:

an optical receiver which accepts an incoming optical signal;

a photodetector associated with the respective optical receiver and responsive to electromagnetic radiation accepted by it;

a demodulator associated with the respective photodetector;

a set of at least one upstream master unit, each master unit semi-permanently optically coupled to the respective client unit, each master unit comprising:

an optical source operative to generate an optical signal characterized by a free-space wavelength less than about 10 micrometers;

a modulator operative to modulate the respective optical signal;

an optical beam director associated with the respective optical source and operating to direct the respective optical signal into free space;

a free-space air-path through which optical radiation from the master unit travels before arriving at the client unit; and

means for automatically orienting at least one optical element selected from the group consisting of: the set of optical beam directors and the set of optical receivers, thereby delivering the optical signal along the free space air-path between the respective master unit and the respective client unit.

3. (Original) The invention of Claim 1 further comprising:

means for automatically orienting at least one optical element selected from the group consisting of: the set of optical beam directors, the set of optical receivers, and the set of optical beam-deflectors, thereby delivering the optical signal along the free-space air-path between the respective master unit and the respective client unit.

4. (Original) The invention of Claim 1 or 2

wherein each upstream master unit comprises a respective first optical transceiver;

wherein each downstream client unit comprises a respective second optical transceiver;

wherein each first optical transceiver comprises the respective master unit optical source, modulator and optical beam director in combination with the following additional elements:

a master unit optical receiver which accepts a respective incoming optical signal;

a master unit photodetector associated with the respective master unit optical receiver and responsive to electromagnetic radiation accepted by it; and

a master unit demodulator associated with the respective master unit photodetector; and

wherein each second optical transceiver comprises the respective client unit optical receiver, photodetector and demodulator in combination with the following additional elements:

a client unit optical source operative to generate a respective client unit optical signal characterized by a free-space wavelength less than about 10 micrometers;

a client unit modulator operative to modulate the respective client unit optical signal; and

a client unit optical beam director associated with the respective client unit optical source and operating to direct the respective client unit optical signal into free space.

5. (Original) The invention of Claim 1 or 2

wherein the set of master units comprises at least two master units located together in a master station; and

wherein the master station comprises a shared mechanical housing, a shared power supply, and a shared command-control communication system for the at least two master units in the master station.

6. (Original) The invention of Claim 1 or 3

wherein the set of optical beam-deflectors comprises at least two optical beam-deflectors located together in a relay station; and

wherein the relay station comprises a shared mechanical housing, a shared power supply, and a shared command-control-communication system for the at least two optical beam-deflectors in the master station.

7. (Withdrawn) An optical communications system alignment method to automatically establish a free-space optical circuit, said method comprising:

(a) providing a steerable optical transmitter component operative to generate an angularly-limited optical signal; a set (comprising zero, one, or more) of steerable optical beam-deflector components; and a steerable optical receiver component having angularly limited responsivity to incident optical signals; and

(b) automatically and sequentially aligning each of the components with a next component in the free-space optical circuit.

8. (Withdrawn) The method of Claim 7 wherein the transmitter component and the receiver component being aligned are each included within separate steerable optical transceivers.

9. (Withdrawn) The method of Claim 7 wherein the transmitter component comprises a photodetector; wherein each of the beam-deflector components and the receiver component comprises a respective retro-reflector which is initially active and responsive to incident light; and wherein (b) comprises

(b1) steering the optical signal with the transmitter component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b2) terminating (b1) when the optical signal is reflected back from the retro-reflector of the next component to the photodetector of the transmitter component; and

(b3) inactivating the retro-reflector of the next component.

10. (Withdrawn) The method of Claim 9 wherein (b) further comprises:

(b4) sending the optical signal from the transmitter component along the optical circuit to the receiver component;

(b5) steering the receiver component over a plurality of directions sufficient in solid-angular extent to encompass the optical beam of (b4); and

(b6) terminating (b5) when the receiver component receives the optical beam of (b4).

11. (Withdrawn) The method of Claim 9 wherein the set of beam-deflector components comprises at least one beam-deflector component, and wherein (b) further comprises:

(b4) for each beam-deflector component, steering the optical signal with the respective beam-deflector component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b5) terminating (b4) for the respective beam-deflector component when the optical signal is reflected back from the retro-reflector of the next component to the beam-deflector

component that is being steered and thence back down the optical circuit to the photodetector of the transmitter component; and

(b6) inactivating the retro-reflector of the next component.

12. (Withdrawn) The method of Claim 8 wherein each of the beam-deflector components and the receiver component comprises a respective retro-reflector which is initially active and responsive to incident light; and wherein (b) comprises:

(b1) steering the optical signal with the transmitter component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b2) terminating (b1) when the optical signal is reflected back from the retro-reflector of the next component to the photodetector of the transmitter component; and

(b3) inactivating the retro-reflector of the next component.

13. (Withdrawn) The method of Claim 12 wherein (b) further comprises:

(b4) sending the optical signal from the transmitter component along the optical circuit to the receiver component;

(b5) steering the receiver component over a plurality of directions sufficient in solid-angular extent to encompass the optical beam of (b4); and

(b6) terminating (b5) when the receiver component receives the optical beam of (b4).

14. (Withdrawn) The method of Claim 12 wherein the set of beam-deflector components comprises at least one beam-deflector component, and wherein (b) further comprises:

(b4) for each beam-deflector component, steering the optical signal with the respective beam-deflector component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b5) terminating (b4) for the respective beam-deflector component when the optical signal is reflected back from the retro-reflector of the next component to the beam-deflector component that is being steered and thence back down the optical circuit to the optical transceiver of the transmitter component; and

(b6) inactivating the retro-reflector of the next component.

15. (Withdrawn) The method of Claim 12 wherein the transceiver that comprises the receiver component comprises a second transmitter operative to generate an angularly-limited second optical signal; and wherein (b) further comprises:

(b4) deactivating the first-mentioned optical signal of (a);

(b5) activating the second transmitter to generate the second optical signal; then

(b6) steering second optical signal over a plurality of directions sufficient in solid-angular extent to reach the previous component of the optical circuit; and

(b7) terminating (b6) when the second optical signal arrives at the photodetector of the transmitter component via the optical circuit.

16. (Withdrawn) The method of Claim 7 wherein each of the beam-deflector components and the receiver component comprises a respective wide-angle photodetector; and wherein (b) comprises

(b1) steering the optical signal with the transmitter component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit; and

(b2) terminating (b1) when the optical signal is detected by the wide-angle photodetector of the next component.

17. (Withdrawn) The method of Claim 16 wherein (b) further comprises:

(b3) sending the optical signal from the transmitter component along the optical circuit to the receiver component;

(b4) steering the receiver component over a plurality of directions sufficient in solid-angular extent to encompass the optical beam of (b3); and

(b5) terminating (b4) when the receiver component receives the optical beam of (b3).

18. (Withdrawn) The method of Claim 16 wherein the set of beam-deflector components comprises at least one beam-deflector component, and wherein (b) further comprises:

(b3) for each beam-deflector component, steering the optical signal with the respective beam-deflector component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b4) terminating (b3) for the respective beam-deflector component when the optical signal is detected by the wide-angle photodetector of the next component.

19. (Withdrawn) The method of Claim 8 wherein each of the beam-deflector components and the receiver component comprises a respective wide-angle photodetector; and wherein (b) comprises

(b1) steering the optical signal with the transmitter component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit; and

(b2) terminating (b1) when the optical signal is detected by the wide-angle photodetector of the next component.

20. (Withdrawn) The method of Claim 19 wherein (b) further comprises:

(b3) sending the optical signal from the transmitter component along the optical circuit to the receiver component;

(b4) steering the receiver component over a plurality of directions sufficient in solid-angular extent to encompass the optical beam of (b3); and

(b5) terminating (b4) when the receiver component receives the optical beam of (b3).

21. (Withdrawn) The method of Claim 19 wherein the set of beam-deflector components comprises at least one beam-deflector component, and wherein (b) further comprises:

(b3) for each beam-deflector component, steering the optical signal with the respective beam-deflector component over a plurality of directions sufficient in solid-angular extent to cause the steered optical signal to reach the next component in the optical circuit;

(b4) terminating (b3) for the respective beam-deflector component when the optical signal is detected by the wide-angle photodetector of the next component.

22. (Withdrawn) The method of Claim 19 wherein the transceiver that comprises the receiver component comprises a second transmitter operative to generate an angularly-limited second optical signal; and wherein (b) further comprises:

(b3) deactivating the first-mentioned optical signal of (a);

(b4) activating the second transmitter to generate the second optical signal; then

(b5) steering second optical signal over a plurality of directions sufficient in solid-angular extent to reach the previous- component of the optical circuit; and

(b6) terminating (b5) when the second optical signal arrives at the photodetector of the transmitter component via the optical circuit.

23. (Withdrawn) The method of Claim 9, 12, 16 or 19 wherein (b1) comprises steering the optical signal in at least two successive phases, wherein each successive phase is performed with a narrower beam width of the optical signal and over a smaller solid angle than the preceding phase.

24. (Withdrawn) The method of Claim 10 or 13 wherein (b5) comprises steering the receiver component in at least two successive phases, wherein each successive phase is performed with a narrower receiver component beam width and over a smaller solid angle than the preceding phase.

25. (Withdrawn) The method of Claim 17 or 20 wherein (b4) comprises steering the receiver component in at least two successive phases, wherein each successive phase is performed with a narrower receiver component beam width and over a smaller solid angle than the preceding phase.

26. (Withdrawn) The method of Claim 11 or 14 wherein (b4) comprises steering the optical signal in at least two successive phases, wherein each successive phase is performed with a narrower beam width of the optical signal and over a smaller solid angle than the preceding phase.

27. (Withdrawn) The method of Claim 15 wherein (b6) comprises steering the second optical signal in at least two successive phases, wherein each successive phase is performed with

a narrower beam width of the optical signal and over a smaller solid angle than the preceding phase.

28. (Withdrawn) The method of Claim 18 or 21 wherein (b3) comprises steering the optical signal in at least two successive phases, wherein each successive phase is performed with a narrower beam width of the optical signal and over a smaller solid angle than the preceding phase.

29. (Withdrawn) The method of Claim 22 wherein (b5) comprises steering the second optical signal in at least two successive phases, wherein each successive phase is performed with a narrower beam width of the optical signal and over smaller solid angle than the preceding phase.

30. (Withdrawn) An optical communications system alignment method comprising:

(a) providing an optical transmitter operative to generate an angularly-limited optical signal characterized by a free-space wavelength less than about 10 micrometers, a target, and a steerable optical beam-deflector;

(b) aligning the optical signal from the transmitter with the optical beam-deflector;

(c) automatically redirecting the optical signal from the transmitter with the optical beam-deflector over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(d) automatically detecting when the redirected optical signal of (c) reaches the target.

31. (Withdrawn) The method of Claim 30 wherein the optical beam-deflector operates autonomously during the re-directing of (c).

32. (Withdrawn) The method of Claim 30 wherein the target comprises a second optical beam-deflector.

33. (Withdrawn) The method of Claim 30 wherein the target comprises an optical receiver.

34. (Withdrawn) The method of Claim 30 wherein the target of (a) comprises a retro-reflector, and wherein (d) comprises automatically detecting at the optical transmitter a retro-reflected portion of the optical signal that has traveled from the optical transmitter to the optical beam-deflector to the retro-

reflector, back to the optical beam-deflector, and back to the optical transmitter.

35. (Withdrawn) The method of Claim 30 wherein the target of (a) comprises a photodetector, and wherein (d) comprises automatically detecting at the target a re-directed portion of the optical signal that has traveled from the optical transmitter to the optical beam-deflector to the photodetector.

36. (Withdrawn) The method of Claim 30 wherein the optical transmitter of (a) comprises a steerable optical beam director, and wherein (b) comprises:

(b1) automatically directing the optical signal from the transmitter with the optical beam director over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(b2) automatically detecting when the optical signal of (b1) reaches the optical beam-deflector.

37. (Withdrawn) The method of Claim 30 wherein the optical beam-deflector is optically passive.

38. (Withdrawn) The method of Claim 36 wherein the optical beam-deflector of (a) comprises a retro-reflector, and wherein (b2) comprises automatically detecting at the optical transmitter a retro-reflected portion of the optical signal that has traveled from the optical transmitter, to the retro-reflector, back to the optical transmitter.

39. (Withdrawn) The method of Claim 36 wherein the optical beam-deflector of (a) comprises a photodetector, and wherein (b2) comprises automatically detecting at the optical beam-deflector a portion of the optical signal that has traveled from the optical transmitter to the photodetector.

40. (Withdrawn) The method of Claim 30 or 36 wherein the target comprises a steerable optical receiver, and wherein the method further comprises:

(e) automatically steering the optical receiver after (d) over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(f) automatically detecting when the optical receiver is pointed at the optical beam-deflector.

41. (Withdrawn) The method of Claim 30 or 36 wherein the target comprises a second steerable optical beam-deflector, wherein (a) further comprises providing an optical receiver, and wherein the method further comprises:

(e) automatically re-directing the optical signal from the transmitter and the first-mentioned optical beam-deflector with the second optical beam-deflector over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(f) automatically detecting when the multiply-redirected optical signal of (e) reaches the optical receiver.

42. (Withdrawn) The method of Claim 41 wherein the optical receiver is steerable, and wherein the method further comprises:

(g) automatically steering the optical receiver after (f) over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(h) automatically detecting when the optical receiver is pointed at the optical beam-deflector.

43. (Withdrawn) The method of Claim 30 wherein (c) is performed in at least two successive phases, wherein each successive phase is performed with a narrower beam-width and over a smaller solid angle than the immediately-preceding phase.

44. (Withdrawn) An optical communications system alignment method comprising:

(a) providing an optical transmitter operative to generate an angularly-limited optical signal characterized by a free-space wavelength less than about 10 micrometers, and a steerable optical receiver;

(b) automatically redirecting the optical signal from the transmitter over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(c) automatically detecting when the optical signal of (b) reaches the optical receiver.

45. (Withdrawn) The method of Claim 44 wherein the optical receiver of (a) comprises a retro-reflector, and wherein (c) comprises automatically detecting at the optical transmitter a retro-reflected portion of the optical signal that has traveled from the optical transmitter to the retro-reflector, and back to the optical transmitter.

46. (Withdrawn) The method of Claim 44 wherein the optical receiver of (a) comprises a photodetector, and wherein (c) comprises automatically detecting at the receiver a portion of the optical signal that has traveled from the optical transmitter to the photodetector.

47. (Withdrawn) The method of Claim 44 wherein the method further comprises:

(e) automatically steering the optical receiver after (c) over a plurality of directions distributed over a solid angle greater than about 0.03 steradian; and

(f) automatically detecting when the optical receiver is pointed at the optical transmitter.

48. (Withdrawn) The method of Claim 44 wherein (b) is performed in at least two successive phases, wherein each successive phase is performed with a narrower beam-width and over a smaller solid angle than the immediately-preceding phase.

49. (Withdrawn) An optical receiver system operative to accept an angularly-limited free-space optical signal characterized by a free-space wavelength less than about 10 micrometers, comprising:

a spatial filter limiting an acceptance angle of the incident optical signal to a value AO;

a spectral filter limiting an acceptance spectral passband of the incident optical signal to a value$\Delta\theta$, wherein

$(\Delta\lambda)\bullet(\ \Delta\theta)^2$ is less than about 10^{-4}nm•rad^2;

a photodetector associated with the respective optical receiver and responsive to electromagnetic radiation accepted by the spatial filter and the spectral filler;

a demodulator associated with the respective photodetector.

50. (Withdrawn) The invention of Claim 49 wherein the optical receiver system comprises a steering system operative to steer the direction of its angularly-limited received beam over a 2-D region of greater than about 0.03 steradians.

51. (Withdrawn) The invention of Claim 49 wherein $\Delta\lambda$, is less than about 10 nanometer.

52. (Withdrawn) The invention of Claim 49 wherein $\Delta\theta$ is less than about 1 milliradian.

53. (Withdrawn) The invention of Claim 49 wherein $\Delta\lambda$ is greater than about 0.5 nanometer.

54. (Withdrawn) The invention of Claim 49 wherein $\Delta\theta$ is greater than about 0.03 milliradian.

55. (Withdrawn) An optical transceiver for an optical communications system, said transceiver comprising:

an optical source generating a transmitted optical signal comprising electromagnetic radiation of free-space wavelength less than about 10 micrometers;

a modulator associated with the optical source and operating to modulate the transmitted optical signal;

an optical beam director operative both to direct the optical signal from the source into free-space in an angularly-limited transmitted beam and also to collect a received optical beam;

a photodetector associated with the beam director and responsive to the received beam;

a demodulator associated with the photodetector; and

a retro-reflector mounted to overlap at least part of an optical aperture of the beam director, intercepting incident optical radiation before its transit through the beam director, the retro-reflector having an acceptance angle greater than about 0.03 steradian.

56. (Withdrawn) An optical transceiver for an optical communications system, said transceiver comprising:

an optical source generating a transmitted optical signal comprising electromagnetic radiation of free-space wavelength less than about 10 micrometers;

a modulator associated with the optical source and operating to modulate the transmitted optical signal;

an optical beam director operative both to direct the optical signal from the source into free-space in an angularly-limited transmitted beam and also to collect a received optical beam;

a photodetector associated with the beam director and responsive to the received beam;

a demodulator associated with the photodetector; and

a wide-angle photodetector mounted to overlap at least part of an optical aperture of the beam director, intercepting incident optical radiation before its transit through the beam director, the wide-angle photodetector having an acceptance angle of greater than about 0.03 steradian.

57. (Withdrawn) The invention of Claim 55 or 56 wherein the optical transceiver also comprises:

a spatial filter limiting an acceptance angle of the received optical signal to a value $\Delta\theta$; and

a spectral filter limiting an acceptance spectral passband of the received optical signal to a value $\Delta\lambda$, wherein

$(\Delta\lambda)\bullet(\Delta\theta)^2$ is less than about $10^{-4}\text{nm}\bullet\text{rad}^2$.

58. (Withdrawn) The invention of Claim 57 wherein $\Delta\lambda$ is less than about 10 nanometer.

59. (Withdrawn) The invention of Claim 57 wherein $\Delta\theta$ is less than about 1 milliradian.

60. (Withdrawn) The invention of Claim 57 wherein $\Delta\lambda$ is greater than about 0.5 nanometer.

61. (Withdrawn) The invention of Claim 57 wherein $\Delta\theta$ is greater than about 0.03 milliradian.

62. (Withdrawn) The invention of Claims 55, 56, or 57 wherein the optical transceiver comprises a steering system operative to steer the direction of the angularly limited transmitted and received beams over a 2-D region of greater than about 0.03 steradian.

63. (Withdrawn) The invention of Claim 62 wherein the optical transceiver includes an optical system operative to increase the beam-width of the angularly-limited transmitted and received beams during circuit alignment operations.

64. (Withdrawn) The invention of Claim 62 wherein the steering system comprises a platform that carries the transceiver, said platform operative-to mechanically point the transceiver with two degrees of angular freedom.

65. (Withdrawn) The invention of Claim 62 wherein the steering system comprises:

a platform that carries the transceiver, said platform operative to mechanically point the transceiver through at least one degree of angular freedom; and

a beam-deflector operative to deflect the beams through at least one angular degree of freedom.

66. (Withdrawn) The invention of Claim 62 wherein the steering system comprises:

a beam deflector positioned to intercept the beams and located on the free-space side of the beam director; and

means for controlling the direction of the beam deflector to optically steer the transmitted and received beams over a 2-D region of greater than about 0.03 steradian.

67. (Withdrawn) The invention of Claim 62 wherein the steering system comprises:

at least two beam deflectors positioned to intercept the beams and located on the free-space side of the beam director; and

means for controlling the direction of each beam deflector in a respective direction, thereby steering the beams with the beam deflectors over a 2-D region of greater than about 0.03 steradian.

68. (Withdrawn) The invention of Claim 62 wherein the steering system comprises an optically-active, non-mechanical beam-deflector with two degrees of angular freedom to optically steer the beams over a 2-D region of greater than about 0.03 steradian.

69. (Withdrawn) The invention of Claim 62 wherein the steering system comprises a mechanical beam-deflection mechanism having at least one angular degree of freedom, and an optically-active, non-mechanical beam-deflection mechanism having at least one angular degree of freedom.

70. (Withdrawn) A transceiver module comprising a plurality of the steerable optical transceivers of Claim 62, wherein the transceiver module comprises a shared mechanical housing, power supply, and command-control¬communication system for the transceivers in the transceiver module.

71. (Withdrawn) A steerable optical beam-deflector comprising:

an optical system operative to deflect an angularly-limited, temporally-modulated optical beam from an incoming direction to an outgoing direction;

a steering system coupled with the optical system and operative to steer the optical beam over a plurality of outgoing directions distributed over a 2-D region of greater than about 0.03 steradian; and

a retro-reflector mounted to overlap at least part of an optical aperture of the optical system, said retro-reflector having an acceptance angle greater than about 0.03 steradian.

72. (Withdrawn) A steerable optical beam-deflector comprising:

an optical system operative to deflect an angularly-limited, temporally-modulated optical beam from an incoming direction to an outgoing direction;

a steering system coupled with the optical system and operative to steer the optical beam over a plurality of outgoing directions distributed over a 2-D region of greater than about 0.03 steradian; and

a wide-angle photodetector mounted to overlap at least part of an optical aperture of the optical system, said photodetector having an acceptance angle of greater than about 0.03 steradian.

73. (Withdrawn) The invention of Claim 71 or 72 wherein the optical beam-deflector includes a system operative to change beam-width of the optical beam in the outgoing direction as compared to beam-width of the optical beam in the incoming direction.

74. (Withdrawn) The invention of Claim 71 or 72, wherein the optical system comprises an optically-passive element, and wherein the steering system comprises a platform that carries the optically-passive element and is mechanically pointable with two degrees of angular freedom.

75. (Withdrawn) The invention of Claim 74, wherein the optically-passive element comprises a mirror.

76. (Withdrawn) The invention of Claim 71 or 72, wherein the optical system comprises an optically-passive element, and wherein the steering system comprises a platform that carries the optically-passive element and is mechanically pointable with at least one degree of angular freedom, and wherein the optical system further comprises a separate beam-deflector that is mechanically pointable with at least one angular degree of freedom.

77. (Withdrawn) The invention of Claim 71 or 72, wherein the optical system comprises an optically-active, non-mechanical beam-deflector providing two degrees of angular freedom.

78. (Withdrawn) The invention of Claim 71 or 72, wherein the optical system comprises an optically-passive, mechanical mechanism mounted for at least one angular degree

of freedom and an optically-active, non-mechanical, beam-deflection mechanism providing at least one angular degree of freedom.

79. (Withdrawn) A beam-deflector module comprising a plurality of the steerable optical beam-deflectors of Claim 71 or 72, wherein said module provides a shared mechanical housing, a shared power supply, and a shared command-control-communication system for the steerable beam-deflectors in the module.

80. (Presently Amended) The invention of Claim 1, ~~55 or 56~~ wherein the optical source is characterized by an optical power less than about 5 milliwatt.

81. (Presently amended) The invention of Claim 1, ~~55 or 56~~ wherein the modulator for the optical source is coupled with and responsive to an Internet connection.